REMARKS

Claim 43 has been amended. Claims 1-55 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 112, Second Paragraph, Rejection:

The Office Action rejected claim 42 under 35 U.S.C. § 112, second paragraph, as indefinite.

Applicants assume that the reference to claim 42 is a typographical error and that the Examiner intended to refer to claim 43. Claim 43 has been amended for clarity and Applicants respectfully request the removal of the 35 U.S.C. § 112 rejection.

Section 103(a) Rejections:

The Office Action rejected claims 1, 2, 4, 5, 10, 11, 14, 15, 17-19, 21, 22, 27, 28, 30-32, 37, 38, 40-43, 45, 46, 48, 50, 52 and 54 under 35 U.S.C. § 103(a) as being unpatentable over Luo et al. (U.S. Patent 6,216,158) (hereinafter "Luo") in view of Coffman et al. (U.S. Patent 6,377,913) (hereinafter "Coffman"). Applicants respectfully traverse this rejection for at least the following reasons.

Regarding claim 1, the Examiner states, "Luo teaches a method of displaying results data in a distributed computing environment, comprising: ... the first service accessing the display service advertisement; and the first service establishing a second messaging channel between the first service and the display service in accordance with the display service advertisement." Applicants respectfully disagree with the Examiner's interpretation of Luo.

As the Examiner affirms, Luo does not disclose a client specifying the display advertisement for a service to use. Furthermore, in contrast to the use of service

advertisements, Luo teaches that *service descriptions are located by searching a directory service* using object types and service attributes as the Examiner's cited passage clearly describes (Luo, column 6, lines 8-21). Another of the Examiner's cited passages (Luo, column 6, lines 45-48) describes how one service may locate other services by using the directory service (Luo, column 6, lines 45-48). Contrary to the Examiner's assertion, Luo does not teach a service accessing a display service advertisement. Luo additionally fails to teach the first_service establishing a second messaging channel between the first service and the display service in accordance with the display service advertisement.

Further regarding claim 1, the Examiner states, "it is well known in the art that a client can specify the display service to use as shown by Coffman. Applicants disagree with the Examiner's statement and disagree with the Examiner's interpretation of Coffman.

Coffman fails to a client specifying a display service. Conversely, Coffman teaches the use of predetermined user preferences to indicate a desired output device and that the user may open a user preference file in device preference 305 and specify the desired output client device (Coffman, column 5, lines 2-11). Applicants can find no teaching in Coffman regarding the use of service advertisements. Further, Applicants submit that Coffman teaches away from the use of service advertisements by teaching that the choice of output device is "determined based upon a *predetermined device preference* stored in the conversational system" (Emphasis added) (Coffman, column 1, lines 50-52 and column 6, lines 39-46).

In light of the above remarks, Applicants assert that the rejection of claim 1 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 1 apply to claims 18, 31, 41 and 48.

Regarding claim 2, the Examiner states that Luo teaches that a "first messaging channel is configured to pass messages in a data representation language between the client the first service" and that a "second messaging channel is configured to pass messages in the data representation language between the first service and the display service." Applicants respectfully disagree with the Examiner's interpretation of Luo. Luo teaches that a "directory service will have objects whose attributes describe the features of available services and optionally include either code to invoke those services or a reference to such code" (Luo, column 9, lines 16-20) and that once the client "has located the necessary services, it downloads the code required to control those services" (Luo, column 3, lines 60- 63). Further, Luo teaches a registry of network services that includes descriptions and that each description "includes at least a reference to program code that can be downloaded" to the control device (Luo, column 1, lines 36-42). Additionally, Luo teaches the use of a command protocol and of RMI (Luo, column 6, lines 26-48) to send requests from the control device to the network service. Hence, under Luo a client uses service-specific code and/or a command protocol to communicate with a service.

Applicants can find no teaching in Luo regarding the use of a data representation language. Therefore, Applicants assert that Luo does not teach a method wherein a "first messaging channel is configured to pass messages in a data representation language between the client the first service" and wherein a "second messaging channel is configured to pass messages in the data representation language between the first service and the display service." Applicants further assert that it would be counter-intuitive to use a data representation language for implementing the code and command based control of network services as described by Luo.

In light of the above remarks, Applicants assert that the rejection of claim 2 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 2 apply to claim 19.

Regarding claim 4, the examiner states that Luo teaches "the first service sending one or more data messages to the display service on the second messaging channel, wherein the one or more data messages include data for the client; and the display service displaying the data from the one or more data messages on a display of the client." Applicants respectfully disagree with the Examiner's interpretation of Luo. Luo teaches a network service sending control messages to other services (Luo, column 7, lines 42-47). Luo also teaches that "[n]one of these services are resident" on the client device (Luo, column 3, lines 60-61). Luo also states that "resources are accessed and controlled, but not resident, on the control device" (Luo, column 3, lines 14-15).

Therefore, Applicants submit that Luo in view of Coffman does not teach a "first service sending one or more data messages to the display service on the second messaging channel, wherein the one or more data messages include data for the client; and the display service displaying the data from the one or more data messages on a display of the client."

In light of the above remarks, Applicants assert that the rejection of claim 4 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 4 apply to claims 21 and 50.

Regarding claim 5, the Examiner states that Luo in view of Coffman teaches a "first service generating a first service message endpoint, wherein the first service message endpoint is configured to send messages to a and receive messages from a display service message endpoint of the display service." Applicants respectfully disagree with the Examiner's interpretation of Luo in view of Coffman. Luo teaches that a control application, and by extension a service using a different service, includes an "application control protocol manager which interfaces between the control device and the network based computer service by requesting tasks from that service (e.g. slide manipulation). This module is responsible for generating the application control protocol to command the selected device," (Luo, column 4, lines 43 – 54). Additionally, Luo teaches that code to access services may be downloaded from a directory service. (Luo,

column 6, lines 16-21 and column 9, lines 17 – 19). Hence, according to Luo, communication between a control application and a service application is performed either by a application control protocol manager already present on the control device or downloaded from a directory service.

Further, Applicants can find no reference nor mention in Coffman regarding the generating of message endpoints. Therefore, Applicants assert that Luo in view of Coffman fails to teach a first service generating a first service message endpoint, wherein the first service message endpoint is configured to send messages to and receive messages from a display service message endpoint of the display service.

In light of the above remarks, Applicants assert that the rejection of claim 5 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 5 apply to claim 22.

Regarding claim 11, the Examiner states that Luo in view of Coffman teaches "the display service displaying the results data from the one or more results data messages on a display of the client." Applicants respectfully disagree with the Examiner's interpretation of Luo in view of Coffman. Luo teaches a network service sending control messages to other services (Luo, column 7, lines 42-47). Luo also teaches that "[n]one of these services are resident" on the client device (Luo, column 3, lines 60-61). Additionally, Luo teaches, "resources are accessed and controlled, but not resident, on the control device" (Luo, column 3, lines 14-15). Therefore, Applicants submit that Luo in view of Coffman does not teach "the display service displaying the results data from the one or more results data messages on a display of the client."

In light of the above remarks, Applicants assert that the rejection of claim 11 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 11 apply to claim 52.

Regarding claim 14, the Examiner states, "Luo in view of Coffman teaches ... wherein the first message includes information for accessing the display service advertisement on the storage device through a space service." Applicants respectfully disagree with the Examiner. Applicants can find no teaching in either Luo or Coffman regarding a first message including information for accessing the display service advertisement. Luo fails to teach the client providing information to the service regarding a display service advertisement as the Examiner states regarding claim 1. Coffman teaches the setting of user preferences to indicate a desired output device (Coffman, column 5, lines 2-11). Applicants further assert that Coffman teaches away from this by disclosing that the output device is "determined based upon a predetermined device preference stored in the conversational system" (Coffman, column 1, lines 50-52 and column 6, lines 39-46).

Additionally, Luo teaches that service descriptors are accessed through a directory of services (Luo, column 1, lines 37-41; column 6, lines 8-22; and column 9, lines 11 - 22). Hence, applicants can find no teaching in Luo or Coffman regarding accessing a service advertisement through a space service.

Applicants therefore submit that Luo in view of Coffman fails to teach that the first message includes information for accessing the display service advertisement on the storage device through a space service.

In light of the above remarks, Applicants assert that the rejection of claim 14 is not supported by the cited art and withdrawal of the rejection is respectfully requested.

Regarding claim 15, the Examiner states that "Luo in view of Coffman teaches ... the first service accessing the display service advertisement comprises accessing the display service advertisement from the storage device through the space service." Applicants respectfully disagree with the Examiner's interpretation of Luo in view of Coffman. Luo teaches that service descriptors are accessed through a directory of services (Luo, column 1, lines 37-41; column 6, lines 8-22; and column 9, lines 11 - 22).

Applicants can find no teaching nor reference in Luo or Coffman regarding accessing the display service advertisement comprises accessing the display service advertisement from the storage device through the space service.

In light of the above remarks, as well as those for claim 14 above, Applicants assert that the rejection of claim 15 is not supported by the cited art and withdrawal of the rejection is respectfully requested.

Regarding claim 30, the Examiner states that Luo in view of Coffman teaches "a fourth device configured to provide a space service accessible within a distributed computing system, wherein the display service advertisement is stored on the fourth device; wherein the first message includes information for accessing the display service advertisement on the fourth device through the space service; and wherein in accessing the display service advertisement, the first service is further configured to access the display service advertisement from the fourth device through the space service." Applicants respectfully disagree with the Examiner's interpretation of Luo in view of Coffman.

Neither Luo nor Coffman teach a space service. Examiner's cite passage (Luo, column 6, lines 9-21) describe the use of a directory service that allows clients (or other services) to search service descriptions. Applicants assert that a dedicated directory service containing service descriptions is not a space service as the Examiner contends.

As shown above regarding claim one, Luo in view of Coffman fails to teach the use of a display service advertisement. Thus, since Luo in view of Coffman also fails to teach a space service, it follows that Luo in view of Coffman must also fail to teach a display service advertisement stored on a fourth device configured to provide a space service, as asserted by the Examiner.

Additionally, applicants can find no teaching in either Luo or Coffman regarding a message including information for accessing the display service advertisement.

In light of the above remarks, Applicants assert that the rejection of claim 30 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 30 apply to claims 40 and 54.

Regarding claim 45, the Examiner states, "Luo teaches a device, comprising: ... wherein the display service is configured to provide a display service advertisement for enabling access to the display service to a client in the distributed computing environment; wherein the first service is operable to establish a messaging channel between the first service and the display service in accordance with the display service advertisement." Applicants disagree with the Examiner's interpretation of Luo.

As shown above in the remarks regarding claim 1, Luo fails to teach the use of service advertisements and instead teaches the use of a directory servicing including that service descriptions are downloaded from the directory service (Luo, column 6, lines 9-22). Therefore, Luo fails to teach wherein the display service is configured to provide a display service advertisement. Further, Luo teaches that clients use the service directory to search for available services (Luo, column 6, lines 9-21). Applicants submit that through the use of a directory service, Luo teaches away from a display service that is configured to provide a display service advertisement to a client in the distributed computing environment.

As also shown above in the remarks regarding claim 1, Luo additionally fails to teach a service operable to establish a messaging channel between the first service and the display service in accordance with the display service advertisement.

In light of the above remarks, Applicants assert that the rejection of claim 45 is not supported by the cited art and withdrawal of the rejection is respectfully requested.

Claims 3, 6-9, 16, 20, 23-26, 33-36, 49, 51 and 55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luo in view of Coffman, and further in view of

"Composable ad hoc location-based services for heterogeneous mobile client", by Hodes, et al., (hereinafter "Hodes").

Regarding claim 16, the Examiner states, "Luo in view of Coffman and in further view of Hodes further teaches the display service advertisement is an eXtensible Markup Language (XML)." Applicants disagree with the Examiner's interpretation of Luo in view of Coffman and in further view of Hodes. Hodes teaches the use of the Service Location Protocol (SLP) for service advertisement and discovery (Hodes, page 414, section 2.3, Service advertisement and discovery). Applicants assert that SLP is a well-known service discovery protocol that uses a query/response grammar and does not use XML. According to Hodes, the Interface Specification Message (ISL), which might be build atop an XML schema, is separate from the service advertisement and is optionally requested and downloaded by a client after having already discovered a service and retrieved the service's properties and metadata (Hodes, page 416, section 3.3 message-level detail, and Figures 3 and 4).

Therefore Applicants submit that Luo in view of Coffman and in further view of Hodes does not teach the display service advertisement is an eXtensible Markup Language (XML) document.

In light of the above remarks, Applicants assert that the rejection of claim 45 is not supported by the cited art and withdrawal of the rejection is respectfully requested.

Claims 12, 13, 29, 39, 44, 47 and 53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luo in view of Coffman, and further in view of Mukherjee et al. (U.S. Patent 6,466,978) (hereinafter "Mukherjee").

Regarding claim 12, the Examiner states, "it is well known in the art that in a distributed computing environment data can be stored on a results space as shown by Mukherjee." Applicants disagree with the Examiner's statement and with the Examiner's interpretation of Mukherjee.

Mukherjee is teaching a distributed file system using independent storage devices for normal file system functions in a multimedia system (Mukherjee, column 4, lines 37-56). Applicants can find no teaching in Mukherjee regarding storing data in a results space and assert that using file storage devices in a distributed file system does not constitute storing data on a results space.

In light of the above remarks, Applicants assert that the rejection of claim 12 is not supported by the cited art and withdrawal of the rejection is respectfully requested.

Regarding claim 13, the Examiner states that "Luo in view of Coffman and in further view of [Mukherjee] further teaches the first service sending a results message to the display service on the second messaging channel, wherein the results message specifies a results advertisement for accessing the results data stored on the results space; the display service accessing the results data from the results space in accordance with the results advertisement." Applicants respectfully disagree with Examiner. Luo teaches the downloading of service descriptors from a registry of network services (Luo, column 1, lines 37-42). Coffman teaches using predetermined device preferences (Coffman, column 1, lines 50-52 and column 6, lines 39-46). Mukherjee teaches a multi-media file system utilizing network storage devices and cluster managers to manage network bandwidth among clients (Mukherjee, column 1, lines 55-67). Applicants can find no reference in Luo, Coffman or Mukherjee regarding a results advertisement.

Therefore Applicants submit that Luo in view of Coffman and in further view of Mukherjee fails to teach the first service sending a results message to the display service on the second messaging channel, wherein the results message specifies a results advertisement for accessing the results data stored on the results space; the display service accessing the results data from the results space in accordance with the results advertisement.

In light of the above remarks, Applicants assert that the rejection of claim 13 is

not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 13 apply to claims 29 and 39.

Regarding claim 44, the Examiner states, "it is well known in the art that in a distributed computing environment data can be stored and accessed on a results space as shown by Mukherjee." Applicants respectfully disagree with Examiner's statement and with the Examiner's interpretation of Mukherjee.

As shown above regarding claim 13 above, Mukherjee teaches a multi-media file system utilizing network storage devices and cluster managers to manage network bandwidth among clients (Mukherjee, column 1, lines 55-67). Applicants can find no reference in Mukherjee regarding a results space. In light of the above remarks, Applicants assert that the rejection of claim 44 is not supported by the cited art and withdrawal of the rejection is respectfully requested. Similar remarks as discussed above in regard to claim 44 apply to claims 47 and 53.

Applicants also assert that numerous other ones of the dependent claims recite further distinctions over the cited art. Since the rejection has been shown to be unsupported for the independent claims, a further discussion in regard to the remaining dependent claims is not necessary at this time.

CONCLUSION

Applicants submit the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-64300/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

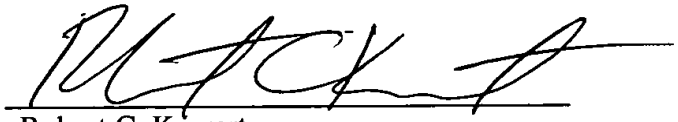
☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $ for fees ( ).

☐ Other:

Respectfully submitted,



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